

differences are nevertheless very conspicuous. The yellow margin around the red skull-cap is very distinct in *Pt. porphyraceus*; very faint and pale in *Pt. fasciatus*. The median abdominal spot, of a dark blackish violet in *Pt. porphyraceus*, is of a purplish wine-red in *Pt. fasciatus*. The chin and upper part of throat are of a pure white in *Pt. fasciatus*, of a pale yellow in *Pt. porphyraceus*; and, lastly, in *Pt. porphyraceus* we miss the greyish-lilac anteapical spot in the longest scapulars, so conspicuous in the allied species.

9. *PTILINOPUS PEROUSII*, Peale; Finsch et Hartl. *l. c.* p. 110.

One adult specimen. Fully agreeing with a Upolu specimen in the Bremen collection.

Hitherto not known from the Tonga Islands.

Long. al.	rostr.	caud.	tars.
5" 1'''	4 $\frac{3}{4}$ '''	3" 1'''	9 $\frac{1}{2}$ '''

10. *RALLUS PECTORALIS*, Less.; Finsch et Hartl. *l. c.* p. 157.

*Rallus forsteri*, nob. *l. c.* p. 162.

One specimen; without the rufous pectoral band. It is certainly disagreeable to kill one's own children; but as to *Rallus forsteri* we are fully convinced of our error. In a set of specimens from the Pelew Islands, some had the rufous pectoral band, in two others it was entirely wanting, and in one bird there was only to be seen faint traces of it.

Long. al.	caud.	rostr.	tars.	dig. med.
5" 1'''	2" 1'''	12'''	17'''	15''' (Tonga.)
5 5	2 1	15	17	15 (Upolu.)
5 1	2 2	13	19	17 (Pelew Islands.)

11. *CHARADRIUS FULVUS*, Gmel.

One specimen in winter plumage; like others in the Bremen collection from New Zealand and the Pelews.

Long. al.	caud.	rostr.	tars.	dig. med.
6" 3'''	2" 1'''	9 $\frac{1}{2}$ '''	19'''	10'''

3. Remarks on some of the Fishes in the Calcutta Museum.

By FRANCIS DAY, F.Z.S. & F.L.S.—Part II.

I have already forwarded to the Society a communication relating to some of the fishes in the Calcutta Museum, which appeared to me to be entirely new or imperfectly known, and I now propose to offer some remarks upon the *Cyprinidæ* in the same collection.

Genus *APUA*, Blyth.

Body elongated and compressed. A small, erectile, bifid sub-orbital spine. Eight barbels—one rostral, one maxillary, and two

mandibular pairs. Dorsal fin in the posterior third of the body, but anterior to the anal. Ventral fins absent.

*APUA FUSCA*, Blyth, J. A. S. of Bengal, 1860, p. 169.

B. iii. D. 2/6. P. 11. A. 2/6. C. 16.

Length of head  $\frac{1}{8}$ , of pectoral  $\frac{1}{11}$ , of caudal  $\frac{1}{9}$  of the total length. Height of body  $\frac{1}{8}$  of the total length.

Eyes small,  $\frac{1}{9}$  of length of head, 4 diameters from end of snout.

Body strongly compressed.

A small, erectile, bifid spine below the orbit. Eight barbels—two rostral, two maxillary, and four mandibular. Anterior nostril long and tubular.

*Fins.* Dorsal commences in the posterior third of the total length; it is half as high as the body. Anal arises behind the vertical from the posterior extremity of the dorsal. Caudal rounded.

*Colours.* Brownish, with a darker longitudinal line.

Three specimens, to  $2\frac{1}{2}$  inches long. Pegu (*Major Berdmore*).

*PROSTHEACANTHUS SPECTABILIS*, Blyth,

is, as suggested by Dr. Günther, identical with *Acanthopsis choirorhynchus*, Bleeker.

*BOTIA NEBULOSA*, Blyth, J. A. S. of Bengal, 1860, p. 165.

B. iii. D. 3/12. P. 13. V. 8. A. 2/5. C. 17.

Length of head  $\frac{1}{5}$ , of pectoral  $\frac{2}{11}$ , of caudal  $\frac{1}{5}$  of the total length. Height of head  $\frac{2}{13}$ , of body  $\frac{1}{5}$  of the total length.

*Eyes.* Diameter  $\frac{1}{5}$  of length of head, 2 diameters from the end of the snout, 2 diameters apart.

Profile of back slightly elevated.

A bifid, erectile (damaged) suborbital spine.

The two pairs of rostral barbels extend as far as to the anterior margin of the orbit, the maxillary ones are slightly longer. Lips thick and glandular; on either side of the symphysis of the lower jaw is a slight elevation studded with pores.

*Fins.* Dorsal commences midway between the snout and posterior margin of the anal fin. Ventral commences under the sixth dorsal ray. Caudal slightly rounded.

Scales small, thirteen rows between the lateral line and the base of the ventral fin.

Lateral line straight.

*Colours.* Brownish, with a leaden band along the side. Dorsal and caudal barred in spots. An ocellus at the upper margin of the base of the caudal fin.

One specimen,  $4\frac{1}{2}$  inches long, from Darjeeling, is in the collection; it was sent by Dr. Wallich.

*BOTIA BERDMOREI*.

*Syncrossus berdmorei*, Blyth, J. A. S. of Bengal, 1860, p. 166.

B. iii. D. 2/9. P. 15. V. 8. A. 2/5. C. 20.

Length of head  $\frac{1}{4}$ , of pectoral  $\frac{1}{7}$ , of base of dorsal  $\frac{1}{7}$ , of base of anal  $\frac{1}{5}$ , of caudal  $\frac{1}{5}$  of the total length. Height of head  $\frac{1}{7}$ , of body  $\frac{1}{5}$ , of dorsal fin  $\frac{1}{6}$ , of anal  $\frac{1}{7}$  of the total length.

*Eyes.* Diameter  $\frac{1}{8}$  of length of head, 4 diameters from end of snout,  $1\frac{1}{2}$  diameter apart.

The rostral barbels are about equal in length to the diameter of the orbit; the maxillary and mandibular ones are short. A bifid erectile spine commences slightly anterior to the orbit, ending opposite its centre.

*Fins.* Dorsal commences midway between the base of the caudal and the anterior margin of the orbit; it is slightly in advance of the ventral. Caudal deeply forked.

Scales absent.

Lateral line straight.

*Colours.* Buff, with ten vertical darkish bands, extending from the back to the abdomen. Head likewise banded. Numerous oblong blotches over the lower half of the body, from opposite the orbit to the end of the pectoral fin. Dorsal fin with three or four rows of spots. Caudal with five or six.

Five specimens, up to  $5\frac{1}{2}$  inches in length, are in the collection; they were sent by Major Berdmore from the Tenasserim provinces.

*BOTIA HISTRIONICA*, Blyth, J. A. S. of Bengal, 1860, p. 166.

B. iii. D. 2/8. P. 15. V. 8. A. 2/5. C. 19.

Length of head  $\frac{1}{4}$ , of pectoral  $\frac{1}{5}$ , of base of dorsal  $\frac{1}{7}$ , of base of anal  $\frac{1}{11}$ , of caudal  $\frac{1}{5}$  of the total length. Height of head  $\frac{1}{6}$ , of body  $\frac{1}{4}$ , of dorsal fin  $\frac{2}{11}$ , of ventral  $\frac{2}{11}$ , of anal  $\frac{2}{11}$  of the total length.

*Eyes* small; diameter  $\frac{1}{5}$  of length of head,  $2\frac{1}{2}$  diameters from end of snout, 2 diameters apart.

Suborbital spine very strong, and extending to opposite the posterior margin of the orbit.

*Fins.* Dorsal arises nearer the base of the caudal than the end of the snout; it is slightly in advance of the ventrals. Caudal deeply forked.

Scales inconspicuous.

Lateral line straight.

*Colours.* Olive, with five dark vertical bands on the body and two or three on the head. All the fins with two broad brown bars.

One specimen, 4 inches long, is in the museum; received from Major Berdmore at Pegu.

*COBITIS BERDMOREI*.

*Acanthopsis berdmorei*, Blyth, J. A. S. of Bengal, 1860, p. 168.

B. iii. D. 2/7. V. 7. A. 2/5. C. 16.

Length of head  $\frac{2}{11}$  of the total length, and more than the height of the body.

*Eyes* small, and situated before the middle of the length of the head.

All the three pairs of barbels long.

*Fins.* Dorsal commences in the middle of the total length, and is slightly posterior to the ventral. Caudal cut square.

Scales distinct.

*Colours.* Covered with dull spots over the body and head. Dorsal and caudal fins spotted and banded.

A specimen, 3 inches long, is in the museum; received from Major Berdmore, Pegu.

#### NEMACHEILUS ZONALTERNANS.

*Cobitis zonalternans*, Blyth, J. A. S. of Bengal, 1860, p. 172.

B. iii. D. 2/9. A. 2/5.

Eyes of moderate size, rather more than one diameter from the end of snout.

*Fins.* Dorsal arises anterior to the ventral, and rather nearer the snout than the base of the caudal, which latter is entire.

Scales distinct.

*Colours.* Ten to eleven bars descend down the lower two-thirds of the body to the abdomen, with intermediate half bands superiorly between them. The dorsal and caudal fins spotted in bands.

Two specimens exist in the collection, of  $1\frac{4}{10}$  and  $1\frac{6}{10}$  inch respectively; they were presented by Major Berdmore, who obtained them in the Tenasserim Provinces.

#### NEMACHEILUS PHOXOCHEILA.

*Cobitis phoxocheila*, M'Clelland, Ind. Cyp. pp. 305, 449, pl. 52. f. 4.

Two specimens, respectively  $1\frac{6}{10}$  and  $2\frac{3}{10}$  inches in length, from Derra Pungi, are in the collection, to which they were presented by Mr. Skipwith, and are labelled *Cobitis phoxocheila*, M'Clelland. Their tails are damaged and their colours bleached.

B. iii. D. 2/9. A. 2/5.

Length of head more than the height of the body.

Eyes 2 diameters from end of snout, and situated before the middle of the length of the head.

Lower surface of the head moderately horizontal; snout rather depressed. No bony ridge between the eyes. Four rostral barbels nearly as long as the diameter of the orbit; two short maxillary ones.

*Fins.* Dorsal commences midway between the anterior margin of the orbit and the base of the anal fin, and slightly in advance of the ventral. The pectoral does not extend to the ventral, nor the latter to the anal.

Scales minute.

#### NEMACHEILUS SERPENTARIUS, sp. n.

B. iii. D. 2/8. P. 17. V. 9. A. 2/5. C. 19. L. l. 64. L. tr. 12/17.

Length of head  $\frac{1}{5}$ , of pectoral  $\frac{1}{7}$ , of caudal  $\frac{1}{5}$  of the total length. Height of body nearly equals the length of the head.

Eyes small, behind the middle of the length of the head, about 4 diameters from end of snout, and 3 diameters apart.

Body subcylindrical; snout pointed. Barbels very short, the maxillary pair the longest. Mouth small. Lips thick, the upper one fimbriated. Nostrils nearer to the eyes than to the snout.

Scales conspicuous, with a raised keel along their centre. Their form, posteriorly, angular.

Lateral line distinct.

*Fins.* Dorsal arises slightly in advance of the ventral, and midway between the snout and the base of the caudal fin; its upper margin is straight. Pectoral reaches two-thirds of the distance to the ventral, and the latter more than halfway to the anal. Caudal deeply emarginate; lobes pointed.

*Colours.* Brownish, with a wide serpentine band of a dark chestnut-colour running from the snout, through the orbit, to the base of the dorsal fin, which last has a black centre. Caudal deep brown, with white margins. A black bar across the base of the ventral.

Three specimens,  $2\frac{1}{2}$  inches long, are in the museum.

#### NEMACHEILUS BLYTHII, sp. n.

B. iii. D. 2/7. V. 9. A. 2/5. C. 19.

Length of head  $\frac{1}{5}$ , of pectoral  $\frac{1}{5}$ , of caudal  $\frac{1}{5}$  of the total length. Height of head  $\frac{1}{9}$ , breadth of head  $\frac{2}{13}$ , height of body  $\frac{2}{13}$  of the total length.

*Eyes.* Diameter  $\frac{2}{9}$  of length of head,  $1\frac{3}{4}$  diameter apart, 1 diameter from end of snout.

Body subcylindrical.

The three pairs of barbels all longer than the diameter of the orbit.

*Fins.* Dorsal arises midway between the snout and the base of the caudal fin, and opposite to the ventral. Caudal deeply forked, its lobes sharp.

Scales minute.

*Colours.* Rather bleached; brownish, darkest above, with a dark band at the base of the caudal fin.

Two specimens, 3 inches long, exist in the collection.

#### NEMACHEILUS CINCTICAUDA.

*Cobitis cincticauda*, Blyth, J. A. S. of B. 1860, p. 172.

B. iii. D. 2/7. P. 11. V. 8. A. 2/5. C. 19.

Length of head  $\frac{1}{5}$ , of pectoral fin  $\frac{1}{5}$ , of caudal  $\frac{1}{11}$  of the total length. Height of head  $\frac{1}{7}$ , of body  $\frac{1}{7}$  of the total length.

*Eyes.* Small, situated in the middle of the length of the head, nearly 3 diameters from the end of the snout,  $1\frac{1}{2}$  diameter apart.

Rostral and maxillary barbels well developed, being nearly as long as the orbit. Free portion of tail longer than high. No projection on the præorbital.

*Fins.* Dorsal commences opposite to the ventral, and midway between the posterior margin of the orbit and the base of the caudal

fin, which last is slightly emarginate. Pectoral extends three-quarters of the distance to the ventral, and the latter halfway to the anal. Upper margin of dorsal fin straight.

Scales minute.

One specimen, 2 inches long, is in the collection, received from Major Berdmore, who obtained it at Pegu.

Two specimens of the *Homaloptera maculata* are in the collection; they were obtained by Dr. Wallich at Darjeeling, and are labelled *Balitora anisura*.

The following new genus is named after H.E. Lord Mayo, Governor-General of India, as a slight acknowledgment of the assistance I have received in my ichthyological investigations:—

#### Genus MAYOA, g. n.

Body anteriorly depressed, posteriorly compressed. Snout smooth and rounded. Eyes lateral. Mouth small, transverse, situated on the inferior surface of the head, *and entirely surrounded by a large sucker formed by both lips*, which are thick, and have a free posterior edge. Pharyngeal teeth in three rows, *uncinate*, 5, 3, 1/1, 3, 5. Pectoral and ventral fins horizontal. Dorsal, without an osseous ray, commences somewhat in advance of the ventrals. Scales of moderate size, those near the anal fin not enlarged. Lateral line continuous, and passes to the centre of the base of the caudal fin.

MAYOA MODESTA, sp. n.

B. iii. D. 1/7. P. 15. V. 9. A. 1/5. C. 19. L. 1. 35. L. tr. 8.

Length of head nearly  $\frac{1}{5}$ , of pectoral  $\frac{2}{9}$ , of base of dorsal  $\frac{1}{7}$ , of base of anal  $\frac{1}{12}$ , of caudal  $\frac{1}{5}$  of the total length. Height of head  $\frac{1}{10}$ , of body  $\frac{2}{11}$ , of dorsal fin  $\frac{2}{11}$ , of ventral  $\frac{2}{11}$ , of anal  $\frac{1}{7}$  of the total length.

Eyes with free margins; they are very nearly on the superior surface of the head, but directed laterally; diameter  $\frac{1}{4}$  of length of head,  $1\frac{3}{4}$  diameter from the end of snout, 2 diameters apart.

Head broad, depressed, and rounded; snout also rounded. No pores on the head. Lower surface of head and chest flat. The snout overhangs the mouth, which is small, transverse, and nearly semilunar in its shape. Mouth with an adhesive sucker formed by both lips; it is extended some distance posterior to the lower jaw, as in the genus *Gonorrhynchus*, from which it essentially differs in that the sucker is completed by the upper lip, so it completely surrounds the opening of the mouth. The lower lip close to the edge of the mouth, the upper lip, and the posterior margin of the sucker are all roughened, the last being fimbriated. Four barbels, one rostral and one maxillary pair, all being rather thick; but their length is only equal to one-half of the width of the orbit. Gill-opening narrow, extending to the base of the pectoral fin; nostrils approximating, divided from one another by a valve.

Teeth pharyngeal, uncinatè, 5, 3, 1/1, 3, 5.

*Fins.* Pectoral and ventrals horizontal, the former arising under the opercles and extending to the latter, its first ray only is undivided and reaches the anal; the anterior portion of the pectoral and ventral fins are enveloped in thick skin. Dorsal arises in advance of the ventral. Caudal slightly forked.

Scales on body, none on the chest, nor so far as the posterior margin of the base of the pectorals.

Lateral line consists of a single tube in each scale; it passes direct to the centre of the base of the caudal fin. There are  $2\frac{1}{2}$  rows of scales between it and the base of the ventral fin.

*Colours.* Greenish brown, no markings visible except a dark blotch behind the opercle.

Two specimens exist in the Calcutta Museum,  $3\frac{1}{2}$  inches long, from Northern India.

#### DISCOGNATHUS LAMTA, Ham. Buch.

Dr. Günther, in his 'Catalogue of Fishes,' vol. vii. p. 69, observed that "this species extends from Syria to Assam," and, "having fortunately examples from the most distant localities, I have convinced myself that they ought to be referred to a single species only."

If all the different species referred to by Dr. Günther are one, then the *Platy cara notata*, Blyth, is only a synonym; it differs only in having a black spot at the base of each dorsal ray.

Specimens apparently of this species are also in the collection, which were obtained in the Abyssinian expedition—six from the Sooroo Pass, 2000 feet above the level of the sea, and six more from the Amba Pass. None are above 2 inches in length.

#### CROSSOCHEILUS MOSARIO.

*Cyprinus mosario*, Ham. Buch.

B. iii. D.  $2/9$ . P. 17. V. 9. A.  $2/5$ . C. 17. L. 1. 37.  
L. tr.  $\frac{7\frac{1}{2}}{10\frac{1}{2}}$ .

Length of head  $\frac{2}{9}$ , of caudal  $\frac{2}{9}$  of the total length. Height of head  $\frac{2}{9}$ , of body  $\frac{2}{7}$  of the total length.

*Eyes.* Diameter  $\frac{2}{7}$  of length of head, 1 diameter from end of snout,  $1\frac{1}{2}$  diameter apart.

No barbels; the lower lip is fringed, the upper lip entire.

*Fins.* Dorsal arises midway between the snout and the base of the caudal, which last is deeply forked. Ventral situated under the middle of the dorsal.

*Scales.* Five and a half rows in the adult, between the lateral line and the base of the ventral fin.

*Colours.* Silvery, back grey.

Ten specimens, up to 10 inches in length, exist in the collection.

DANGILA BERDMOREI, Blyth, J. A. S. of Bengal, 1860, p. 162.

B. iii. D.  $3/23$ . V. 9. A.  $2/5$ . L. 1. 31. L. tr.  $6/?$ .

Length of head  $\frac{1}{5}$ , of caudal  $\frac{1}{4}$  of the total length. Height of head  $\frac{2}{13}$ , of body  $\frac{1}{4}$ , of dorsal fin  $\frac{2}{13}$  of the total length.

*Eyes.* Diameter  $\frac{4}{5}$  of length of head,  $\frac{3}{4}$  of a diameter from end of snout.

Large open pores on front of the snout. Rostral barbels the longest, and equal in length to the diameter of the eye.

*Fins.* Dorsal commences in the anterior third of the total length. The pectoral does not quite reach the ventral, nor the latter the anal. Caudal deeply forked.

*Scales.* Three and a half rows exist between the lateral line and base of the ventral fin.

Colours, in spirit, uniform.

The single specimen in the collection is 4 inches long, and was received from Major Berdmore, who obtained it in the Sitang river. It is now in rather a bad state.

**BARBUS (BARBODES) BLYTHII, sp. n.**

B. iii. D. 3/9. P. 15. V. 9. A. 3/5. C. 17. L. 1. 22.  
L. tr. 4/5.

Length of head  $\frac{1}{4}$ , of caudal  $\frac{1}{4}$  of the total length. Height of head  $\frac{2}{9}$ , of body  $\frac{2}{7}$  of the total length.

*Eyes.* Diameter  $\frac{2}{5}$  of length of head,  $\frac{3}{4}$  of a diameter from end of snout,  $\frac{2}{4}$  of a diameter apart.

Præorbital covered with pores; opercles two-thirds as long as high. Barbels well developed, the nasal reaching the eye, and the maxillary to below the centre of the orbit.

*Fins.* Dorsal arises midway between snout and base of caudal; its third ray articulated. It is slightly in advance of the ventral. Caudal deeply forked.

Lateral line complete.

*Scales.* Two and a half rows between lateral line and base of ventral fin.

Colours uniform.

One specimen, 2 inches long, from the Tenasserim provinces, presented by Major Berdmore, and marked *Capoeta macrolepidota*, C. & V.

**BARBUS (BARBODES) COMPRESSUS, sp. n.**

B. iii. D. 3/9. P. 15. V. 9. A. 3/5. C. 17. L. 1. 22.  
L. tr. 4/5.

Length of head  $\frac{1}{5}$ , of pectoral  $\frac{1}{6}$ , of base of dorsal  $\frac{1}{9}$ , of base of anal  $\frac{1}{8}$ , of caudal  $\frac{1}{5}$  of the total length. Height of head  $\frac{2}{13}$ , of dorsal fin  $\frac{1}{8}$ , of ventral  $\frac{1}{8}$ , of anal  $\frac{1}{8}$  of the total length.

*Eyes.* Diameter  $\frac{2}{9}$  of length of head,  $1\frac{1}{2}$  diameter from end of snout,  $1\frac{1}{2}$  diameter apart.

Head much compressed; the whole of the cheeks covered with pores. The posterior extremity of the maxilla extends to below the anterior margin of the orbit. Rostral barbel extends to below the middle of the orbit, the maxillary to the angle of præopercle. Mouth inferior; upper jaw the longest.

*Fins.* Dorsal arises midway between the snout and the base of



the caudal, it is in advance of the ventral; its last undivided ray is osseous, not enlarged, and entire. Caudal deeply forked.

Lateral line,  $3\frac{1}{2}$  rows of scales between it and the base of the ventral fin.

*Colours.* Silvery, fins stained darker.

A fine specimen exists in the Calcutta Museum; it was with an *Oreinus* from Cashmere.

BARBUS (BARBODES) INNOMINATUS, sp. n.

*Leuciscus binotatus*, Blyth, J. A. S. of B. 1858, p. 290, not C. & V. (Kuhl).

B. iii. D.  $3/9$ . V. 9. A.  $2/5$ . C. 17. L. l. 24. L. tr.  $\frac{4\frac{1}{2}}{4\frac{1}{2}}$ .

Length of head  $\frac{2}{7}$ , of caudal nearly  $\frac{2}{7}$  of the total length. Height of body  $\frac{2}{7}$  of total length.

*Eyes.* Diameter  $\frac{2}{7}$  of length of head, 1 diameter from end of snout, 1 diameter apart.

Barbels four, the rostral nearly reach the orbit, the maxillary are shorter.

*Fins.* Third dorsal ray semiosseous, smooth; the fin commences midway between the snout and the base of the caudal fin, which latter is forked in its posterior two-thirds.

*Scales.* Three rows between the lateral line and the base of the ventral fin.

*Colours.* A black spot at the base of the caudal fin, none now apparent at the base of the dorsal fin.

Two specimens in the Calcutta Museum, to  $1\frac{1}{10}$  inch in length, from Ceylon, presented by Dr. Kelaart.

BARBUS (BARBODES) MACROCEPHALUS, M'Clelland, Ind. Cyp. pp. 270, 335, t. 35. f. 2.

B. iii. D.  $3/9$ . P. 15. V. 9. A.  $2/5$ . C. 19. L. l. 26. L. tr.  $\frac{3\frac{1}{2}}{3}$ .

Length of head  $\frac{1}{5}$  of the total length. Height of head  $\frac{1}{7}$  of the total length.

*Eyes.* Diameter  $\frac{1}{4}$  of length of head,  $1\frac{1}{4}$  diameter from end of snout, 1 diameter apart.

Snout obtuse; mouth anterior. Rostral barbel extends to under the anterior third of the orbit; the maxillary to beyond the posterior margin of the orbit.

*Fins.* Dorsal arises midway between snout and base of caudal fin. Osseous ray strong, smooth, and as long as the head. Pectoral reaches the ventral, which latter does not extend to the anal. Caudal forked.

*Scales.* Two and a half rows between lateral line and base of ventral fin.

The above description is from an old stuffed specimen, 8 inches long, probably presented by Dr. M'Clelland. I can only account for the statement of the head being two-fifths of the length of the body, as a misprint for *one-fifth*. The drawing shows it could not

be  $\frac{2}{5}$ . A second specimen, 20 inches long, from Sikkin, presented by Dr. Jerdon, differs in the head being  $\frac{2}{7}$  of the length of the body. I think this species may eventually prove to be only a variety of *Barbus mosal*, Ham. Buch.

**BARBUS (PUNTIUS) MACULARIUS.**

*Systomus macularius*, Blyth, J. A. S. of Bengal, 1860, p. 159.

B. iii. D.  $\frac{3}{8}$ . P. 15. A.  $\frac{3}{5}$ . C. 19. L. 1. 33. L. tr.  $\frac{6\frac{1}{2}}{6}$ .

Length of head  $\frac{1}{4}$  of the total length. Height of body  $\frac{1}{3}$ , of osseous dorsal ray  $\frac{1}{5}$  of the total length.

*Eyes.* Diameter  $\frac{1}{3}$  of length of head, 1 diameter from end of snout, 1 diameter apart.

*Fins.* Dorsal arises midway between the anterior margin of the orbit and the base of the caudal fin; its third ray is osseous, and strongly serrated. Caudal emarginate in its posterior fourth.

*Scales.* Four rows between the lateral line and base of the ventral fin.

*Colours.* Silvery, each scale with a black spot at its base; the upper margin of the eye likewise black.

Two specimens,  $4\frac{1}{2}$  inches long, but in rather a bad state, exist in the collection. They were presented by Major Berdmore, who collected them in the Sitang river.

**BARBUS (PUNTIUS) UNIMACULATUS.**

*Systomus unimaculatus*, Blyth, J. A. S. of Bengal, 1860, p. 159.

B. iii. D.  $\frac{3}{8}$ . P. 11. V. 8. A.  $\frac{2}{5}$ . C. 19. L. 1. 24. L. tr.  $\frac{4\frac{1}{2}}{14}$ .

Length of head  $\frac{2}{7}$ , height of body  $\frac{1}{3}$  of the total length.

*Eyes.* Diameter  $\frac{1}{3}$  of length of head, 1 diameter from end of snout, 1 diameter apart.

Mouth small, extending half the distance to below the orbit. No barbels.

*Fins.* Dorsal commences midway between the snout and base of caudal fin; its third ray is osseous, weak, and smooth.

Lateral line commences to become imperceptible opposite the posterior extremity of the dorsal fin.

*Colours.* Silvery, a black mark at the base of each dorsal ray.

A number of fry up to  $1\frac{8}{10}$  inch exist in the collection; they were received from Tenasserim. Whether it is safe to found a species on such materials must be open to question, as the specimens would evidently have grown to a larger size.

**CARASSIUS AURATUS.**

“The home of the Gold Carp or Goldfish is China and its islands and Japan,” observes Dr. Günther (Cat. of Fishes, vii. p. 32); but it has a more extended range I find from examining the collection of fishes brought by Dr. J. Anderson, who accompanied the late expedition through Burmah to China. Some specimens were taken in the Irrawaddi above Mandalay, showing it to be an inhabitant of

northern Burmah. I am told it is one of the commonest fish in the bazar in Yunan in China.

*SCHIZOTHORAX LABIATUS.*

*Racoma labiatus*, McClelland, C. J. H. N. ii. p. 578, t. 15. f. 1.

The following description is taken from a *stuffed specimen* 27 inches long, presented by Sir A. Burns, from Helmind, in Afghanistan, and is marked "type of *Racoma labiatus*."

D. 3/8. P. 15. V. 11. A. 3/5. C. 21.

Length of head  $\frac{1}{5}$ , height of body  $\frac{1}{8}$  of the total length.

Body fusiform, a considerable rise from the snout to the occiput.

Upper jaw longest, lips thick; the maxillary barbels reach to below the orbit. The posterior process of the intermaxillaries extends half-way to the orbit.

*Fins.* Dorsal arises considerably nearer to the base of the caudal than to the end of the snout; its third ray (injured superiorly) is osseous, strong, and serrated posteriorly. Anal narrow, reaching nearly to the base of the caudal when laid backwards. Caudal forked. Pectoral first ray strong.

Scales small, deciduous.

*MURIA ALBOLINEATA*, Blyth, J. A. S. of Bengal, 1860, p. 163.

B. iii. D. 2/7. P. 11. V. 7. A. 2/11. C. 17. L. 1. 31.

Length of head  $\frac{2}{9}$ , of caudal  $\frac{1}{5}$  of the total length. Height of body  $\frac{2}{7}$  of the total length.

*Eyes.* Diameter  $\frac{2}{5}$  of length of head,  $\frac{3}{4}$  of a diameter from end of snout, 1 diameter apart.

Body compressed, gradually tapering off towards the tail.

Mouth anterior, lower jaw the longest. The posterior extremity of the maxilla reaches to below the anterior third of the orbit. The rostral barbels reach to opposite the posterior margin of the præopercle, the maxillary to opposite the base of the ventral fin.

*Fins.* Dorsal arises opposite the anal, and midway between the posterior margin of the præopercle and base of the caudal, which is forked in its posterior fourth.

*Scales.* Half a row between the lateral line and base of the ventral fin.

Lateral line ceases opposite the base of the ventral fin.

*Colours.* In spirit silvery, with a silver stripe along the side.

Six specimens, to 2 inches in length, are in the collection; presented by Mr. Atkinson, from Moulmein.

*NURIA ALTA*, Blyth, J. A. S. of Bengal, 1860, p. 162.

Two specimens exist in the collection, the description of which I do not find to agree with the types. In the largest the maxillary barbel extends to the base of the ventral fin, in the smallest to that of the anal. The formula is

B. iii. D. 2/6. P. 15. V. 6. A. 2/5. C. 19. L. 1. 32. L. tr. 6/3.

Height of body  $\frac{1}{4}$ , length of head  $\frac{1}{5}$  of the total length.

The pectoral fins are not so long as the head in either specimen.

The species appears identical with *Nuria danrica*, Ham. Buch.

#### NURIA MALABARICA.

*Esomus malabaricus*, Day, Proc. Zool. Soc. 1867, p. 299.

Dr. Günther, Cat. Fishes, vii. p. 201, demurs to this species without a lateral line being considered to differ from *N. danrica* (in which a lateral line is present), because he has only received young examples. Seven specimens, up to 2 inches in length, exist in the Calcutta collection, and I have taken many others in the Irrawaddi. I have no doubt as to the distinctness of the two species.

#### BARILIUS INTERRUPTA, sp. nov.

B. iii. D. 2/7. P. 10. V. 7. A. 2/12. C. 19. L. l. 34. L. tr.  $\frac{6\frac{1}{2}}{4\frac{1}{2}}$ .

Length of head  $\frac{2}{5}$ , of pectoral  $\frac{1}{6}$ , of base of dorsal  $\frac{1}{8}$ , of base of anal nearly  $\frac{1}{5}$ , of caudal  $\frac{1}{5}$  of the total length. Height of head  $\frac{1}{6}$ , of body  $\frac{2}{7}$ , of dorsal fin  $\frac{2}{11}$ , of ventral  $\frac{1}{11}$ , of anal  $\frac{1}{6}$  of the total length.

*Eyes.* Diameter  $\frac{2}{5}$  of length of head, rather above  $\frac{1}{2}$  a diameter from end of snout, 1 diameter apart.

Lower jaw slightly the longest; no barbels. Third suborbital bone about twice as wide as the soft naked portion of the cheek below it. The posterior extremity of the maxilla extends to below the anterior third of the orbit. Humeral process of shoulder-bone *very slightly* developed.

Teeth pharyngeal, uncinatè, 5, 4, 2/2, 4, 5.

*Fins.* Dorsal arises in advance of the anal, and midway between the posterior margin of the opercle and the base of the caudal fin. Pectoral scarcely reaches so far as the ventral, whilst the latter only extends two-thirds of the distance to the base of the anal. Caudal forked in its posterior fourth.

Scales with numerous striæ.

Lateral line descends gently for five scales, then more abruptly for two more, and having continued along five more scales, to opposite the base of the ventral fin, it ceases.

*Colours.* Silvery, with short vertical bars along the middle of the side. All the upper scales with large black dots.

Numerous specimens, to 2 inches in length, from Hotha, collected by Dr. J. Anderson.

PERILAMPUS FUIVESCENS, Blyth, J. A. S. of Bengal, 1860, p. 163.

B. iii. D. 2/8. P. 15. V. 7. A. 2/20. C. 17. L. l. 33. L. tr. 7/3.

Length of head  $\frac{1}{5}$ , of pectoral above  $\frac{1}{7}$ , of base of anal  $\frac{1}{4}$  of the total length. Height of body  $\frac{1}{3}$  of the total length.

*Eyes.* Diameter  $\frac{1}{3}$  of length of head, 1 diameter from end of snout, 1 diameter apart.

Body compressed, abdomen not trenchant.

*Fins.* Dorsal commences midway between the posterior margin of

the orbit and the posterior extremity of the caudal fin, and opposite to the commencement of the anal. Ventral has an elongated ray.

Scales largest above the lateral line.

Two specimens, up to  $2\frac{1}{2}$  inches in length, are in the collection.

*PERILAMPUS OSTEOGRAPHUS*, M'Clelland, Ind. Cypr. pp. 289, 392, t. 45. f. 3.

This species is identical with the *Danio micronema*, Bleeker, as described by Dr. Günther (Bleeker's paper not being available).

Four specimens are in the collection. Besides these, three others have been received from one locality, and agree with the *P. osteographus* in every respect, excepting that the maxillary barbels are deficient.

#### 4. Notes on the Localities of two Species of Land-Shells and three Species of Volutes. By JOHN BRAZIER, C.M.Z.S.

##### 1. DIPLOMMATINA MARTENSI.

*Diplommatina (Diancta) martensi*, H. Adams, Proc. Zool. Soc. 1866, p. 446, pl. 38. fig. 11.

*Diplommatina paradoxa*, Crosse, Journ. de Conchyl. 1867, p. 449.

*Diplommatina (Diancta) martensi*, H. Adams, Journ. de Conchyl. 1868, p. 100.

Found on the mountains under decayed leaves in very wet places in the Island of Avolau, Fiji Islands.

Coll. Brazier, Adams, and Crosse.

##### 2. PALAINA COXI.

*Palaina coxi*, H. Adams, Proc. Zool. Soc. 1868, p. 16, pl. 4. fig. 14.

*Diplommatina wisemanni*, Brazier's MS.

Found under leaves on damp ground in the pine-forests of Norfolk Island. This and the preceding species I collected in 1865.

Coll. Brazier, Adams, and Angas.

##### 3. AULICA RUECKERI.

*Voluta rueckeri*, Crosse, Journ. de Conchyl. 1867, p. 444, et 1868, p. 97, pl. 1. fig. 1.

The correct locality of this species is New Georgia, Solomon Islands, and not Nichol Bay, West Australia, as given by M. Crosse. I have seen as many as two hundred specimens brought to Sydney in one of the Solomon-Islands traders. The Volutes obtained at Nichol Bay are well known to us, viz. *Scaphellæ ellioti*, *volva*, and *reticulata*, and *Aulica norrisii*. Having received large quantities of all the above named, I am certain that *Aulica rueckeri* was never found on the Australian continent. I have a specimen, quite a giant in size,